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Notice of Allowability	Application No.	Applicant(s)	
	09/634,484	TOLETY, SIVA PERRAJU	
	Examiner	Art Unit	
	Duc C Ho	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 4-04-05.
2. ☒ The allowed claim(s) is/are 1, 3-7, 9, 11-13, 8, 10, 14-15, 17-20, 22-23, 21, 24, 26-30, 32-35, 31, 36-43, and 45-69. Renumbered 1-65, respectively.
3. ☒ The drawings filed on 08 August 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>04-25-05</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

EXAMINER 'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Joel Wall on 04-25-05.

The application has been amended as follows:

In the claims:

Claim 1, line 11, after "and a second node", delete --- and a second one ---.

Reason for Allowance

2. Regarding claims 1, 3-7, 9,11-15,17-20, 22-24, 26-30, 32-43, and 45-48 the prior art fails to teach or suggest a method for determining an amount of bandwidth available in at least one communication path coupling a plurality of nodes together, the method comprises a step of determining an amount of bandwidth available in at least a portion of the at least one communication path, based on the determined amount of time and the determined amount of propagation delay, in combination with other limitations, as specified in the independent claims 1,14,15, 24, 36, 45, and 47.

Regarding claims 8, 21, and 31, the prior art fails to teach or suggest a method for determining an amount of bandwidth available in at least one communication path coupling a plurality of nodes together, the method comprises a step of determining an amount of bandwidth available in at least a portion of the at least one communication path, wherein this step is performed by executing a predetermined algorithm which is defined as follows:

$$BW_{POP-CPE} = (PS) / (RTT_{T-CPE} - ((PS) / BW_{T-POP}) - 2 * MQD)$$

Wherein $BW_{POP-CPE}$ represents the amount of bandwidth available in at least a portion of the at least one communication path, RTT_{T-CPE} represents the minimum the amount of time taken for the at least one third information signal to arrive at the test node, relative to the time when the at least one second information signal was forwarded from the test node, (PS) represents a predetermined size of an individual one of the second information signals, BW_{T-POP} represents a predetermined bandwidth provided between the test node and the first node, and MQD represents a predetermined minimum queuing delay present in the first node, in combination with other limitations, as specified in the independent claims 8, 21, and 31.

Regarding claim 10, the prior art fails to teach or suggest a method for determining an amount of bandwidth available in at least one communication path coupling a plurality of nodes together, the method comprises a step of using the second information signals, wherein the second information signals include information specifying a predetermined number of hop counts included in the second, larger portion of the at least one communication path, wherein, during the forwarding step, a step is

performed of reducing the predetermined number of hop counts specified by the information included in each second signal, based on a number of hops included in the second, larger portion of the at least one communication path, and wherein the second node responds to receiving each individual second signal by further reducing the predetermined number of hop counts specified by the information included in that second information signal, and by then transmitting a corresponding third information signal, based on a result obtained by further reducing that predetermined number of hop counts, in combination with other limitations.

Regarding claims 49-69, the prior art fails to teach or suggest a method for determining an amount of bandwidth available in at least one communication path coupling together at least one router and a first node, the method comprises a step of determining a first bandwidth available in at least a portion of the at least one communication path, based on the determined amount of time and the determined amount of the information received in the first node, in combination with other limitations, as specified in the independent claims 49, 58, 63 and 67.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Ho whose telephone number is (571) 272-3147. The examiner can normally be reached on Monday through Friday from 7:00 am to 3:30 pm.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

5. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner



Duc Ho

04-25-05